SYMONS'S
MONTHLY
METEOROLOGICAL MAGAZINE.

I.] FEBRUARY, 1866. [PRICE FOURPENCE, *or 5s. per ann. post free*

INTRODUCTORY.

I BELIEVE that it is a rule *not* to judge of a serial by its first number, and I hope that the rule will be adhered to in the present instance, since future numbers will, at any rate, receive more time and attention than the present one, which having to appear simultaneously with *British Rainfall*, 1865, has had to be cared for in scraps of time snatched from its more bulky *confrère*. But let not this semi-apology be construed as a promise of future brilliancy, on the contrary, I would now, as ever, rather promise nothing, and let all I do sink or swim by its own merits; still it may be well to state that I *hope* to give in future numbers, Tables of Foreign and Colonial Rainfall, Notes on Thunderstorms in England during 1856-7 and 8, also on those in 1864 (these are somewhat voluminous, and contain not only curious results as to colour, &c., of lightning, but also as to its mechanical effects); Notices of Meteorological Books, new and old; and, above all, the latest rainfall intelligence, both as to its fall, its measurement, its publications, and its instruments. Lastly, I need hardly say, that its future depends very much on its readers; if they will send me prompt and full information of any unusual occurrence in their neighbourhood, and if they will (if they think it good) recommend it to their friends, the two essentials of high quality and a paying circulation may be obtained; and so I may be able to enlarge it, though my maxim always is, say everything in as few words as possible.

G. J. SYMONS.

136, Camden Road, N.W., Feb. 7th, 1866.

ON THE STORAGE OF WATER FOR COUNTRY VILLAGES.

THE severity of the drought during the last two or three summers has helped to force public attention to a point not generally appreciated at its full import. I refer to the influence of drainage operations on the supply of water available for man and beast in the summer months and periods of drought. It is very desirable the

present copious water supply should not obliterate the remembrance of recent want, and I therefore take this early opportunity of quoting Mr. Bailey Denton's last communication to the *Times*, and expressing a most earnest hope that something may be done.

To the Editor of the Times.

SIR,—The excessive rainfall of the present winter, following as it does three successive summers in which drought has been experienced, must, I believe, have satisfied all persons of the propriety of storing the excess of certain periods to supply the deficiency of others, and it cannot fail also to bring those who have watched the progress of drainage throughout the country to the conclusion that the collection of water discharged by drainage ought to be a part of the same operation with drainage itself, although with the valleys covered with water as they now are it may be hard to recall the fact that there were many rural places in which the poor cottagers were paying as much as 1d. a pail for water during the past summer.

In the first month of winter (October) we had a rainfall equal to half the fall of the previous six summer months, although in July and August there were extraordinary storms in which very heavy rainfalls occurred. From October up to the present time the rainfall has been above the average, the consequence of which will be that, as the subterranean supply will be fully replenished, and the crust of the earth more than satisfied, those lands that have been underdrained will continue to discharge water until we are well advanced into summer. We shall thereby have the means of storing water of the best quality after the present floods have passed away, thus showing that had storage reservoirs been at hand we should have been able to select either the inferior surface waters, which are now in excess, or the superior waters discharged from the under drains when the excess has passed away, and so provide for any coming drought.

For small towns and villages this mode of collecting a supply might be most economically carried out. Reservoirs sufficient to hold enough water for an ordinary village of 400 persons may be made, and the water conveyed down the village street, with proper stand-pipes, for about 1*l.* a head. In some instances several villages might combine for larger reservoirs, which in some cases might cost more, but in others, where circumstances favoured a combination, even less than the sum named.

I have the honour to be, Sir, your obedient servant,

J. BAILEY DENTON.

Seeing that even the £400 for which (if I understand rightly) Mr. Denton undertakes to construct his reservoir, lay down mains, &c., &c., is not easily available in every village, and recognizing fully the imperative necessity of some decided steps being taken to store our spare water for future use, I would suggest that labour and spades would alone be required for the following, which would store a great deal of water, good enough at any rate for nine-tenths of the purposes of life, and infinitely better than much that was used during the late drought.

The plan is simply this :—Choose a handy part of a brook, where the substratum is believed to be tolerably water tight and easy of excavation, and make a pit of such size, depth and breadth, as would be most convenient, right in the bed of the brook ; it would be easy to carry the water in a trough while the excavation was going on, and, being for the good of each villager, perhaps they would take a turn at it instead of their gardens for one or two evenings a week until it was finished. The only objection I see at present is, that possibly though the brook current would pass *over* the pit-reservoir the water in

it might stagnate slightly; this might be obviated by a partition of wood or brick run right down to the bottom of the pit, and having *there* an opening, the water must then be in constant motion, descending on one side, ascending on the other. A grating to prevent ingress of extraneous substances, and fence to keep out children, sheep, cattle, &c., a windlass, and perhaps, cover, would complete my small scheme, which I merely suggest, and leave others to criticise, and, perhaps, annihilate.

NOTABILIA OF JANUARY, 1866.

THE most general characteristics of the month have been its mildness, windiness, and wetness. In so large an area as the whole of the British Isles, exceptions always occur; this month the stations differing from the majority, and having had a dry month, are in the north midland counties of England, and the east of Scotland and Ireland. The south-east of England has had the greatest excess, much of which was attributable to the remarkable fall of snow on the 11th, which (as is not infrequently the case when snow falls heavily with an air temperature of 32°) was very dense, and almost sticky from its semi-fluid, semi-frozen state; such snow, of course, adheres with especial closeness to trees wet with the rain which preceded the snow; then came frost, binding all firmly on until even the telegraph wires were as thick as one's arm, and it is no wonder the break-down was almost universal in the district where the above conditions were fulfilled, which was generally the case in North Sussex, Kent, Surrey, Middlesex, Herts, and Oxford.

EXPLANATORY OF THE TABLE OF MONTHLY RAINFALL.

A very few words will suffice on this head. The order of the Stations is that in which they follow in *British Rainfall*; the Roman numerals refer to the divisions therein, and which correspond with those of the Registrars-General of England and Scotland, and of the Cattle Plague reports of the Privy Council Office. The heights of the gauges are the elevation of their receiving surfaces above the ground, and above mean sea level at Liverpool (=Ordnance Datum). The next column gives the total fall, and then follows the difference from the average of the past six years. No doubt this is a short period to adopt, but it was necessary to steer between two difficulties. If a long average (twenty years, for instance,) was held indispensable, then the stations must have been few and most irregularly distributed, or the column nearly all blanks. It has therefore been decided to adopt a medium course, and adopt the mean of the six years, 1860-5, the relation of which to the previous ten years, 1850-9, is fully shown in the annual tables for 1865, which are now in the press.

The headings of the other columns sufficiently explain themselves, save that the date of a rainfall is (in accordance with the rule now generally adopted) the day preceding that at 9 a.m. on which the amount was measured. It almost seems as if *all* had not quite understood this point, the dates this month being irregular.

RAINFALL IN JANUARY, 1866.

Div.	STATIONS. [The Roman numerals denote the division of the Annual Tables to which each station belongs.]	Height of Gauge. Above Ground		Above Sea Level.	Depth of Rain. Total Fall.	Diff. from average 1860–5	Greatest Fall in 24 hours. Depth.	Date.	Days on which ·01 or more fell.
		ft.	in.	feet.	inches.	inches.	inches.		
I.	Camden Town	0	6	100	3·90	+1·95	1·20	10	23
II.	Staplehurst (Linton Park)	0	6	200 ?	3·83	+1·77	1·35	11	21
,,	Selborne (The Wakes)	4	0	500 ?	6·23	+2·96	·73	14	20
III.	Hitchen	2	0	240	3·63	+1·49	·75	11	23
,,	Banbury	7	0	345	2·57	+ ·48	·28	31	22
,,	Wisbech	0	6	10	2·10	...	·41	22	18
IV.	Bury St. Edmunds (Culford)	1	2	...	2·48	+ ·61	1·02	13	12
V.	Calne	0	11	250	3·60	...	·50	10	20
,,	Plymouth (Goodamoor)	0	2	580	8·44	+2·42	3·76	13	20
,,	Barnstaple	0	6	31	5·44	+2·80	·70	11	23
,,	Taunton	1	6	38	5·15	+2·51	·81	11	23
VI.	Shrewsbury (Highfield)	5	6	200	2·40	+ ·78	·48	7	15
,,	Tenbury (Orleton)	0	9	200	3·00	+ ·47	·35	7	24
VII.	Leicester (Wigston)	0	6	220	2·08	+ ·10	·39	13	19
,,	West Retford	0	6	50	1·25	— ·27	·20	2	16
,,	Derby	5	0	180	1·60	— ·19	·21	12	19
VIII.	Manchester	2	7	106	3·25	+ ·76	·57	21	20
IX.	York	0	6	50	1·64	+ ·06	·26	14	17
,,	Skipton (Arncliffe)	3	0	750	10·11	+4·47	1·48	21	22
X.	North Shields	1	0	124	1·51	— ·60	·30	30	20
,,	Borrowdale (Seathwaite)	1	0	422	25·99	+9·63	3·03	21	24
XI.	Abercarn	1	3	450	8·92	...	1·10	15 & 21	13
,,	Haverfordwest	2	0	60	7·90	+2·85	1·19	6	21
,,	Rhayader (Cefnfaes)	2	0	880	7·42	+2·90	·91	2	24
,,	Llanberis (R. Y. Hotel)	1	0	370	15·85	...	2·42	2	23
XII.	Dumfries	0	5	70	5·56	+ ·96	·55	30	21
,,	Hawick	4	0	580	4·85	...	·70	8	23
XIV.	Ayr (Auchendrane House)	2	3	94	8·30	+3·78	1·42	8	24
XV.	Otter House	0	6	130	10·89	+4·19	1·39	31	25
,,	Fort William	0	8	20	14·19	...	1·25	14	30
XVI.	Leven (Nookton)	0	6	80	2·80	— ·07	·37	30	19
,,	Stirling (Deanston)	0	0	130	6·96	+2·24	1·01	1	25
,,	Logierait	1	0	250	5·01	...	·66	2	18
XVII.	Ballater	0	10	656	2·87	...	·46	20	17
,,	Aberdeen	4	8	115	2·52	...	·43	12	21
XVIII	Inverness (Culloden)	3	0	104	2·47	...	·36	5	17
,,	Portree	0	4	60	19·17	+6·08	1·35	14	31
,,	Loch Broom	0	8	48	9·00	...	·86	14	31
XIX.	Helmsdale	1	0	34	2·63	...	·25	17	26
,,	Sandwick	2	0	78	4·33	+1·04	·52	1	27
XX.	Cork	6	0	65	6·76	...	1·04	2	22
,,	Waterford	4	0	60	5·42	+ ·56	·92	2	26
,,	Killaloe	5	0	128	6·63	+1·77	·90	12	25
XXI.	Portarlington	9	0	236	3·72	— ·29	·49	13	25
,,	Monkstown	0	6	100	2·59	— ·80	·48	30	21
XXII.	Galway	6	0	25	8·96	...	·77	12	27
,,	Bunninadden (Doo Castle)	1	0	...	6·55	...	·80	3	26
XXIII	Bawnboy (Owendoon)	1	3	218 ?	7·00	..	·72	3	27
,,	Waringstown	0	4	191	3·94	...	·47	2	21
,,	Strabane (Leckpatrick)	0	5	260	7·34	...	·81	3	23

+ Shows that the fall was above the average ; — that it was below it.

METEOROLOGICAL NOTES ON THE MONTH.

ENGLAND.

CAMDEN TOWN.—Temperature of air above 50° on 13 days, the highest being 59° on 3rd. The temperature has seldom been known to exceed 55° in January, and there is believed to be no case on record of a temperature of 59°·0, or of 13 days with a temperature of 50°. The air only fell to freezing point on three days—11th, 12th, and 13th, but on the night of the 12th there was a short period of intense cold, a mercurial minimum thermometer *on* the snow fell to 9°·3.; the ordinary spirit thermometer only fell to 18°, but it was partially under the snow. Lunar halos on 4th, 21st, and 22nd. At 1·30 a.m. of 10th heavy rain began, lasting till 4 a.m., when it turned to snow, and by 9 a.m. the latter lay 6 inches deep, allowing for the rain; still the snow must have had a density far greater than ordinary, the total product when melted being 1·20 in.

LINTON PARK.—The most remarkable feature in the month was the snowstorm on the 11th, preceded by a heavy fall of rain, little or no frost until the evening, when the thermometer fell to 18°. Lightning had been seen on the two evenings preceding this, and the barometer fell 1·49 in. between the 8th and 11th. The snow drifted so as to render some of the lanes and highways impassable until they were cut, but with the exception of the 11th and 12th the weather was very mild.

SELBORNE.—A most tempestuous month, remarkable for rapid variations of temperature and pressure. The thermometer on the night of the 12th fell here to 15°; at Alton to 3°; at Chawton to 7°; here on the morning of the 13th it rose to 45°, being 30° in the course of the night. Loud thunder on 3rd, hail on afternoon of 8th, and aurora at night. On 11th, heavy snow from 1 a.m. to 3 p.m. Aurora on 15th, 17th, and 21st.

HITCHEN.—Heavy fall of snow commenced at 4 a.m. on 11th. Postal communication with London stopped, owing to melting snow in the valley between Stevenage and Buntingford.

BANBURY.—High winds and fluctuating barometer. Two inches of snow on the 11th, followed by high wind, from the joint effects of which the telegraph posts were broken. A little snow on 8th and 9th. Snowdrops and draba verna on 21st. No day on which the day temperature did not exceed 32°.

WISBECH.—Mean temperature of month 42°, which is 5°·3 above the average of January for six years. Air temperature only fell to freezing on five days. General health of locality good. Gale (15 lbs.) on 2nd, and (20 lbs.) on 8th. Lunar halo on 29th.

CULFORD.—The mildest January I recollect. Mean temperature 40°. Common crocus in full flower since the 8th, and, which is somewhat remarkable, it preceded the common snowdrop. Snow only fell on one day (11th), but it was then 5 in. deep.

CALNE.—Gale on 2nd; snow on the downs. Snowdrop and winter aconite in bloom on 5th. Heavy gale and hail on 8th. Snow on 9th, and 11th, four inches deep. Crocus in bloom on 18th.

GOODAMOOR.—Hail on 8th; snow on 9th. On 11th a hurricane came from E. and N.E., with hail, rain, and snow, doing great damage to the trees and buildings. It began about 1.30 a.m., and was most violent from 7.30 to 8.0 a.m. Thaw on 13th, and great floods in the rivers.

TAUNTON.—High wind on 2nd. Stormy, with snow, on 11th.

ORLETON.—A very warm and stormy month; frequent rains, but never very heavy. Some snow on 9th and 12th. Lunar rainbow on 22nd, at 9.15 p.m.

WEST RETFORD.—Great prevalence of high winds from S. and S.W. Snow on 9th and morning of 13th.

DERBY.—The fluctuation of the barometer this month has been remarkable, viz., from 28·709 in. on 9th, to 30·430 on the 26th. The gales, though frequent, have not been severe in the midland counties. The extreme mildness of the month is shown by the budding of the trees. Violets were gathered early in the month, and snowdrops are abundant.

MANCHESTER.—Snow and hail on 9th. Heavy snow early on the 12th.

ARNCLIFFE.—Very mild month, but with an unusually heavy fall of rain. Little or no snow.

NORTH SHIELDS.—Heavy storm of snow and sleet on 1st. Snow daily from 9th to 13th—also on 29th. Lunar halo on 24th, 25th, 26th, and 31st. Solar halo on 30th. Pansy in flower on 17th, Christmas rose on 18th, furze on 19th, snowdrop on 21st, blue hepatica on 27th, polyanthus and red hepatica on 28th. Unusually mild.

SEATHWAITE.—Excessive rainfall and very high temperature. Frost only on three nights. Eleven days with more than an inch of rain—five with more than two inches. Monthly gauge gave 24·86 inches. Gauge on The Stye gave 34·12.

WALES.

ABERCARN.—Rainy month; heavy snowstorm on 11th. Range of barometer 1·55 inch.

HAVERFORDWEST.—General characters of the month were extreme wetness, gloom, and a prevalence of heavy gales, chiefly from the W., S.W., and N.W. Mildness has also been a prevailing characteristic; on one occasion only has the temperature fallen actually to the freezing point. Snowdrops were in full flower about the 15th of the month. The barometer has been chiefly remarkable for uniform low pressure and readings, rather than for any unusual extremes; in a word, I may say, it has been blowing heavily for at least two-thirds of the month, the only calm period being about the 23rd to the 27th, when the readings of the barometer were high; the sky during that time was generally overcast and the air calm. The month finished stormy, mild, and wet. Lightning and hail on 1st; lightning also on 9th. Hail on 11th.

RHAYADER.—Strong gales of wind from S.W. and N.W. during the whole month. Temperature very high. Snow on 11th; large flood in the Wye on 13th, and again on the 21st. Max. temp. 54°.

LLANBERIS.—Very wet month; more than an inch of rain on six days.

SCOTLAND.

DUMFRIES.—From the 2nd to the 9th very stormy and wet, with a violent gale on the 7th. Frosty from 10th to 12th, with heavy snow on the 11th. From 13th to 21st stormy and wet, with violent gale on 15th. From 22nd to 27th, six days very fine and mild for the season, the thrush and blackbird singing in the woods. Snowdrops in flower on 20th, and common blue hepatica on 26th. The last four days very stormy and wet, with snow on the 29th. The rainfall is 1·27 in. above the average of the previous sixteen years; during that period the rainfall for January has only four times exceeded that of present month—in 1851 the amount was 7·14; in 1852, 8·10; in 1860, 7·60; in 1863, 7·10 inches. The least fall was 1855, 0·55 in. The mean temperature 41°·0, has exceeded last January by 4°·7.

AYR.—The month has been characterized by excessive rain, fluctuating pressure and temperature—the latter being generally high, extremely violent S.W. winds. The great London snowstorm did not reach here with any severity—we only had one inch of snow. Rainfall nearly double our ten years average, and more than ever previously recorded in one month.

OTTER HOUSE.—Wet and stormy; very little snow, and that little soon disappeared. Rain 4·41 in. above the average. Lightning on night of 1st and 21st, with distant thunder; hail on 8th and 15th; snow on 10th and 11th. Storms on several days; in fact, the weather since December 19th, 1865, is well described by an eminent poet in the following couplet—

"The days are cold, and dark, and dreary,
It rains, and the wind is never weary."

NOOKTON.—January, like November and December, has been singularly mild, and also like them almost without frost or snow, but frequent wind-storms mostly from the S.W. High winds throughout the month; snow on 1st, 10th, 11th (5 to 7 p.m.) 29th.

FORTWILLIAM.—Temperature throughout the month was very mild, except in the first week. A considerable fall of snow on 3rd and 4th, but it did not lie long; a little snow fell also on the 28th.

DEANSTON.—Weather throughout the month very mild for the season, only six days without rain; very little snow, and what fell, melted on the following day. Snowdrops, hepaticas, &c., in flower in the middle of the month. 2 inches of snow on 1st; slight falls on 10th, 11th, 13th, 29th, and 30th.

LOGIERAIT.—Altogether an exceptional month. At times (*e.g.*, from 22nd to 28th) we experienced lovely weather, with all the balminess of Spring, and a temperature such as none can recall for the month of January. Again we have had but very little snow, and though falling somewhat heavily upon the surrounding hills, never remained above three days. Owing partly to the melting of the snow and partly to the rainfall, the river Tay was in great flood for a fortnight, at one time gaining a height which it had not reached before for 17 years past. While we have had some wonderfully fine and spring-like weather during the month, the rainfall has been very great.

BALLATER.—Snow on 1st, 10th, 13th, 15th, 18th, 20th, and 29th, and frequent gales. Lunar halos on 24th and 28th.

ABERDEEN.—The month has been milder than usual, the mean temperature being 38°·1, which is 1°·8 *above* the mean of the ten years 1856—1865. The mean pressure 29·51 in. at sea level, is ·23 in. *below* the mean of the same period. Frequent heavy gales of short duration, but none accompanied the great depression of the barometer to 28·51 in. on 9th. On 2nd, 5 to 12 p.m., hurricane from S. and S.S.W.; on 3rd, a S.W. gale, lasting through the night. Aurora on 4th, nightly from 6th to 15th, on 17th, 21st, 23rd, 27th, and 28th. Lightning on 6th. Gale on 7th. Snow (half-an-inch) on 10th; snow also on 12th and 13th, with a gale on the latter day. Fog on 17th, and, at 7 p.m. a fine meteor with train of sparks. Lunar halos 23rd, 24th, 25th, 26th, and 28th. Snow on 29th and 30th.

CULLODEN.—Barometer 28·425 (corrected) at noon on 9th, having continued low since 31st December at 4 a.m., on which day it fell to 28·20 inches. These great depressions were caused no doubt by the severe and disastrous storms which prevailed over England and Scotland and in the Atlantic Ocean. Snow-drops in flower on 17th.

HELMSDALE.—Rain fell on every day but five; snow on 10th and 28th. The severe storm which visited the south was scarcely felt here.

PORTREE.—This has been the stormiest month ever remembered. Mean temperature 40°·4, mean pressure at sea level 29·44 inches. Minimum temperature 16·2 (on grass 9°·0) on 11th. Hail on 7 days, snow on 6 days, lightning on 21st, halo on 27th, meteors on 4th.

SANDWICK.—The month has been rather warmer and drier than usual, but a low barometer, 0·22 *below* the mean. The mean daily motion of the air has been 472 miles, against a mean of 441 miles. Thunder, lightning, and hail at 10 a.m. on 1st; hail at 3 p.m. on 7th, and again on 10th. A gale from 6 a.m. on 15th till 4 a.m. on 16th; horizontal motion 1000 miles in 22 hours, for 8 of which it averaged 50 miles an hour. On 21st there was a gale of 40 miles an hour from 2 till 7 a.m. Lunar halo at 8 p.m.

IRELAND.

KILLALOE.—The wettest January in 20 years except three, viz., 1849, 7·47; 1852, 6·85; 1860, 7·07. Frequent and violent winds throughout, mostly from S.W. Hail showers on 1st; violent storm on night of 7th from S.W. to W., and then from N.W.

MONKSTOWN.—A constant succession of gales until 22nd, those of 7th and 14th being most violent. Very little frost; min. 30°; max. of barometer 30·586 on 24th, min. 28·956 on 9th. Rain on an unusual number of days, but the amount not excessive. Temperature very mild. Fine double lunar rainbow at 8.30 p.m. on 2nd. Snow on 7th and 8th.

GALWAY.—Lunar rainbow on 20th, at 7 p.m.

DOO CASTLE.—This month remarkably wet and mild; birds singing the whole month. Snow on 1st, 8th, 9th, 11th and 12th.

OWENDOON.—Twenty-seven wet days, some very stormy ones, and some very mild; floods very high. Snow on 1st and 28th.

WARINGSTOWN.—Snow on 1st, 8th, 9th, 11th, and 29th. Heavy westerly gale on 8th. Max. temp. 54° on 15th; min. 24° on 11th. Frost on grass on 20 nights.

LECKPATRICK.—Very wet month; mild open weather; some severe gales. Sixteen nights with frost on grass. Mean temperature 39°·3 being 2·4 above Mr. Glaisher's adopted mean for January at Greenwich. Here the means have been, January, 1863, =39°·4; 1864, =38°·2; 1865, =35°·5; 1866, =39°·3.

MINIMUM THERMOMETER ON GRASS.

To the Editor of the Meteorological Magazine.

DEAR SIR,—I wish to inquire what is the usual practice of Meteorologists with regard to a point which I venture to think is not so trivial as it seems. I see frequent allusions to the "minimum on grass," and would venture to ask—What sort of grass? I have often placed thermometers on grass in different parts of our garden at Ripon, and have always found those placed on long and matted grass—such as grass that was cut for hay, or grazed generally is in winter—the lowest. 10° is the common difference, on a clear night, between a thermometer so placed, and one at 4 feet, close at hand and duly protected *on all sides* from the effects of radiation. For example, last Friday I registered the following temperatures—air 21·3, grass 7·5; and in the previous week, air 27·0, grass 16·0. I shall be very glad if any of your correspondents can clear up this question.

Charterhouse, Jan. 17th, 1866. F. W. STOW.

[The instructions hitherto issued on the placing of the minimum thermometer on grass certainly have been rather vague, and require more strict definition. Probably Mr. Glaisher's paper on the "Radiation of Heat at Night from the Earth," &c.—Phil. Trans. 1847, pp. 119–216—affords the best basis of such instructions, supplemented, perhaps, by the experience of observers generally. We may remark that when commencing observations with a thermometer on grass, we made use of a patch of turf about 2ft. in diameter, and on subsequently removing the instrument to a large grass plot the recorded minima were so much lower that we rejected all the previous readings. Has any one tried the effect of *simultaneous* readings on large and small surfaces of grass? As to the effect of variations from the length and quality of grass, the results arrived at by Mr. Glaisher were that long grass gave 1°·1 lower min. than short, and that if the thermometer was even one inch *above* the grass it would be 2°·8 warmer. There are several points well worthy of consideration. For instance, would it be well to adopt some substance of high but constant, radiating power, and not like grass varying with its daily growth; or is it better to let grass which has been our radiation measure for some years remain so, but try to make the conditions uniform at all stations. Again, the spirit minimum often reads 5° higher than Casella's mercurial minimum. Is it not imperative that *all* should use one or the other, or at any rate that it should always be stated *which* is used? Lastly, the Scottish Meteorological Society recommend a spirit minimum whose bulb is black glass, while those used in England are mostly, if not all, transparent spirit, in clear white glass. Comparison of these instruments should be made, and the results will find ready insertion in these columns.—ED.]

LATEST INTELLIGENCE.

[*Under this head we propose to notice events up to the moment of going to press, although full accounts will be reserved for the succeeding number, in order to give time for others to supply information bearing upon them.*]

THUNDERSTORM.—On SUNDAY, FEBRUARY 4th, a rather severe thunderstorm is reported from Rugby, Leicester, Chipping Norton, and various other places.

GALE AND LOW BAROMETER.—On SUNDAY, 11th, a severe gale in London. Barometer at Camden Town remarkably low—reduced to sea level it was—

9 a.m.,	29·249	3.0 p.m.,	28·663	4.15	28·619	5.30p.m.	28·615
1 p.m.,	28·835	3.15 p.m.,	·657	4.30	·606	6.0	·628
1.30p.m.,	·794	3.30 p.m.,	·640	4.45	·61	7.0	·663
2 p.m.,	·748	3.45 p.m.,	·629	5.0	·611	9 p.m.,	·802
2 30p.m.,	28·720	4.0 p.m.,	28·622	5.15	28·616	12th, 9 a.m.,	29·336

Rain from Jan. 1st to Feb. 12th at Camden Town is 6·22, the average being 2·20.

Unavoidably postponed—"Low Barometer at Scottish Lighthouses," by A. Cunningham, Esq. "Aurora of October 19th, 1865," by Dr. Rankin. "Floods at Port Louis, Mauritius."